

# ORION

CREW EXPLORATION VEHICLE

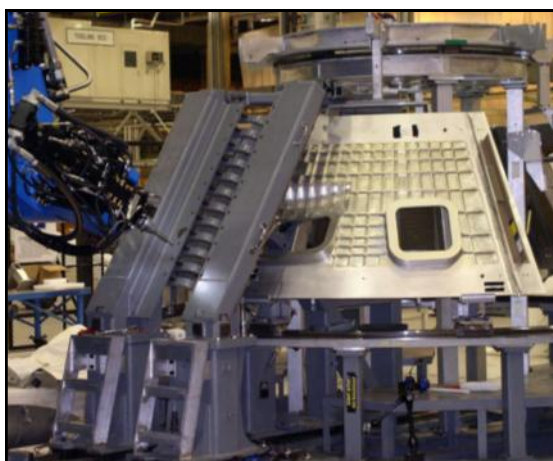
WEEKLY ACCOMPLISHMENTS



10.30.09



The Flight Test Office recently took delivery of two significant pieces of hardware at the White Sands Missile Range in New Mexico. The Abort Test Booster (ATB) Launch Stand (Photo in banner and left) will stand over 20 feet tall when assembled and will support the Abort Test Motor during testing. The ATB Breakover Facility (Photo above) is used to lift the Abort Test Motor from the truck to the ATB Launch Stand. Delivery of this hardware will allow for Ascent Abort Motor Tests in the future.

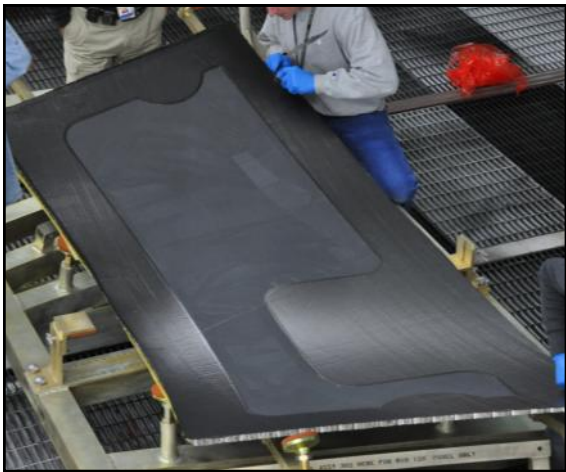


Ground Test Article welding continues at the Michoud Assembly Facility in New Orleans, Louisiana. Shown above is the #2 Window Panel trim setup, which is part of the Crew Module (CM) Cone Weld Assembly. Shown right is the CM Backbone Fit Check.





 The final steps prior to beginning the Ground Test Article (GTA) Composite Heatshield layup are in process (Photo above) at the Lockheed Martin Composite Facility in Denver, CO. A tool try has been completed, which demonstrates the layup methods and tool release coatings. The Composite Heatshield will begin official layup this month and a completed Heatshield will be delivered to Michoud for integration to the GTA in May, 2010. Shown upper left is a standard cure of a composite sandwich panel in the large oven at the Second Floor Factory in Denver, CO. The new High Temperature composites are vacuum only oven cures and have shown to be very manufacturing friendly. The first composite sandwich panel with doublers applied (Photo left) has been completed and sent out for machining at Process Fab Inc. in California. Once the machining is completed, Titanium spools will be potted in and Thermal Tiles will be bonded onto the substrate. The panel will be delivered to Michoud for Integration to the GTA in May, 2010.



The first flight tooling, called the Crew Module (CM) Support Structure with air bearing dolly, arrived at KSC Operations & Checkout facility. The CM support structure (Photo right) will be used as the base support for the CM during the assembly, integration & production flow and also as the air bearing transfer dolly between processing stations.

